

# CCTV / Video intercom

A CCTV monitoring system allows you to see exactly who it is knocking at your door and is particularly effective for screening entrants to your property when combined with an intercom system and automatic controls for locks and doors.

When installing a CCTV system it is important to choose the correct system for your purpose. Here are some things you need to consider when installing CCTV:

- Object size / camera angle of view - Camera angle of view determines how clear details can be seen on the monitor.
- Lens quality - Do not take lenses for granted, they are vitally important in ensuring a usable image is produced. Optical quality differs among different manufacturers, and among different models of the same manufacturer so shop around.
- Chip quality (CCD / CMOS) – This relates to the physical chip size and type of chip used in the cameras' optical processor. This affects the resolution and the sensitivity of the camera and will affect the quality of the final image.
- Camera electronics and Image processing quality – The camera further processes the CCD/CMOS chip signal. This means it can slightly improve it, or make it worse depending on whether the final image is compressed and by how much.
- Transmission media – Any method of transmitting the image has its own limitations and is susceptible to external factors and interferences such as cable problems, distance the signal has to travel, noise etc. Transmission losses reflect directly on the picture quality.
- Analogue to Digital Conversion (A/DC) - All CCD/CMOS chips first produce analogue signal. A/D conversion occurs in streamers, IP cameras, Digital Video Recorders etc. This conversion can also reduce the signal quality.
- Compression - All CCTV images must be compressed which results in some loss of quality. The key is to find the best compromise between image quality and data storage capabilities.
- Monitor / Display - display device technology now come in a range of formats such as CRT, LCD and Plasma. Typically Standard definition CCTV is produced by in an interlaced TV standard, hence interlaced CRTs provide best quality video. LCDs are progressive scanning display devices and are good for computer decoding and non-interlaced display and all displays are at best quality in their native resolution.
- Observer / Operator - picture quality perception is also influenced by the observer and this includes the viewing distance from the monitor and the lighting conditions (dimmer light is better). Operators cannot observe more than one screen at a time and multiple monitors should only be viewed for a short time.